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(54) **MAGNETIC CLOSURE APPARATUS FOR PORTABLE COMPUTERS**

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(52) **U.S. Cl.** **335/207; 335/205; 24/303**

(58) **Field of Search** **335/205, 206, 335/207; 24/303**

(56) **References Cited**

U.S. PATENT DOCUMENTS

D336,077 S * 6/1993 Barry et al. D14/316

5,559,670 A * 9/1996 Flint et al. 361/681
5,664,298 A * 9/1997 Nessar-Ivanovic 24/303
5,844,543 A * 12/1998 Tamura et al. 345/156
6,201,688 B1 * 3/2001 Leman 361/681
6,215,381 B1 * 4/2001 Aoki 335/207

* cited by examiner

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(57) **ABSTRACT**

A magnetic closure apparatus for portable computers that utilizes magnetic attraction and repulsion to allow users to open and close the first housing member and second housing member of said portable computer. The first housing member has a computer and a magnetic member disposed at its inward edge. The second housing member has a magnetic apparatus, which comprises a magnetic member disposed at its inward edge corresponding to the position of the magnetic member disposed on the second housing member and a sliding member which interlinks with the magnetic member. The polarity of the magnetic field of the magnetic member disposed on the second housing member is the opposite of the polarity of the magnetic field of the corresponding magnetic member disposed at the first housing member. Moving the sliding member enables the movement of the dual layer magnetic member, thereby allowing the closure and opening of the first housing member and second housing member.

22 Claims, 10 Drawing Sheets

